

FORM PTO-1449 (modified)
To: U.S. Department of Commerce
(PW FORM PAT-1449)
Patent and Trademark Office

Atty. Dkt. No.

M#

Client Ref.

280083

US/A/P 8339US

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: CHEN et al.

Appln. No.: 09/822,831

Filing Date: April 2, 2001

Examiner: Unassigned

Group Art Unit: 1713

Date: August 17, 2001 Page 1 of 3

U.S. PATENT DOCUMENTS

Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
n	AR 5,334,292	08/02/1994	Rajeshwar et al.	—	—	
n	BR 6,096,453	01/01/2000	Grunwald	—	—	
n	CR 4,697,000	09/29/1987	Witucki et al.	—	—	
n	DR 3,574,072	04/06/1971	Louvar et al.	—	—	
n	ER 4,468,291	08/28/1984	Naarmann et al.	—	—	

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n	FR	Fan et al, Synthesis and Properties of Carbon Nanotube-Polypyrrole Composites, Synthetic Metals, 1999, pp. 1266-1267 (no month)				
n	GR	Downs, C. et al., Efficient Polymerization of Aniline at Carbon Nanotube Electrodes, Advanced Materials, 1999, Vol.11, No.12, pp. 1028-1031 (no month)				
n	HR	Huggins, R.A., Supercapacitors, Philosophical Transactions of the Royal Society of London Series A-Mathematical Physical and Engineering Sciences, 1996, Vol. 354, No. 1712, pp. 1555-1566 (no month)				
n	IR	Fricke, J. et al., Aerogels-Recent Progress in Production Techniques and Novel Applications, Journal of Sol-Gel Science and Technology, 1998, Vol. 84, No.2, pp.261-269 (no month)				
n	JR	Faggioli, E., Supercapacitors for the Energy Management of Electric Vehicles, Journal of Power Sources, 1999, Vol. 84, No.2, pp.261-269 (no month)				
n	KR	Mayer, S.T. et al., The Aerocapacitor-An Electrochemical Energy-Storage Device, Journal of the Electrochemical Society, 1993, Vol. 140, No.2, pp.446-451				
n	LR	Conway, B., Transition from 'Supercapacitor' to 'Battery' Behavior in Electrochemical Energy Storage, Journal of the Electrochemical Society, June 1991, Vol. 138, p. 1539				
n	MR	Liu, C.Y. et al, Electrochemical Characterization of Films of Single-Walled Carbon Nanotubes and Their Possible Application in Supercapacitors, Electrochemical and Solid State Letters, 1999, Vol.2, No.11, pp. 577-578 (no month)				
n	NR	Kalaji, M. et al., The Study of Conducting Polymers for Use as Redox Supercapacitors, Synthetic Metals, 1999, Vol. 102, No.1-3, pp.1360-1361. (no month)				
n	OR	Long, J. et al., Voltammetric Characterization of Ruthenium Oxide-based Aerogels and Other RUO2 Solids: The Nature of Capacitance in Nanostructures Materials, Langmuir, 1999, Vol.15, No.3, pp. 780-785 (no month) Nanostructured				
n	PR	Sarangapani, S. et al., Materials for Electrochemical Capacitors-Theoretical and Experimental Constraints, Journal of the Electrochemical Society, 1996, Vol.143, No.11, pp.3791-3799				
n	QR	Zheng, J. et al., A New Charge Mechanism for Electrochemical Capacitors, Journal of Electrochemical Society, 1995, Vol. 142, No.1, pp. L6-L8				

Examiner *J. Lynn* Date Considered: 2/24/03

*EXAMINER: Initial citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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W	AR	Sawai, K., A Method of Impedance Spectroscopy for Predicting the Dynamic Behavior of Electrochemical System and its Application to a High Carbon Electrode, Journal of the Electrochemical Society, 1997, Vol. 144, No.3, pp. 988-995							
W	BR	Niu, C. et al., High Power Electrochemical Capacitors Based on Carbon Nanotube Electrode, Applied Physics Letters, 1997, Vol. 70, No. 11, pp. 1480-1482							
W	CR	Fusalba, F., Electropolymerization of Polypyrrole and Polyaniline-Polypyrrole from Organic Acidic Medium, Journal of Physical Chemistry B, 1999, Vol. 103, No.42, pp. 9044-9054 (no month)							
W	DR	Carlberg, J. et al., Poly (3,4-Ethylenedioxythiophene) as Electrode Material in Electrochemical Capacitors, Journal of the Electrochemical Society, 1997, Vol.144, No.4, pp. L61-L64							
W	ER	Otero, T. et al., Statistical Design to Optimize Specific Charges in Polypyrrole by Electrosynthesis, Journal of the Electrochemical Society, 1999, Vol. 146, No. 11, pp. 4118-4123 (no month)							
W	FR	Curran, S. et al., A Composite from Poly (M-phenylenevinylene-co-2,5 Dioctoxy-P-Phenylene-Vinylene) and Carbon Nanotubes: A Novel Material for Molecular Optoelectronics, Advanced Materials, 1998, Vol. 10, No. 14, p.1091-1094.							
W	GR	Fan, J. et al., Synthesis, Characterizations, and Physical Properties of Carbon Nanotubes Coated by Conducting Polypyrrole, Journal of Applied Polymer Science, 1999, Vol. 74, No.11, pp. 2605-2610 (no month)							
W	HR	Yoshino, K., Electrical and Optical Properties of Conducting Polymer-Fullerene and Conducting Polymer-Fullerene and Conducting Polymer-Carbon Nanotube Composites, Fullerene Science and Technology, 1999, Vol. 7, No. 4, pp. 695-711 (no month)							
W	IR	Chen, G. et al, Carbon Nanotube and Polypyrrole Composites: Coating and Doping, Advanced Materials, 2000, Vol. 12, No. 7, pp. 522-526 (no month)							
W	JR	Esumi, K. et al., Chemical Treatment of Carbon Nanotubes, Carbon, 1996, Vol. 34, No. 2, pp. 279-281 (no month)							
W	KR	Naoi, K. et al., Electrochemistry of Poly (1,5-diaminoanthraquinone) and its Application in Electrochemical Capacitor Materials, Journal of the Electrochemical Society 147(2), 2000, pp. 420-426, (no month)							
W	LR	Audebert, P. et al, Electrochemistry and Polymerization Mechanisms of Thiophene-Pyrrole-Thiophene Oligomers and Terthiophenes. Experimental and Theoretical Modeling Studies, J. Phys. Chem. B 1998 102, pp. 8661-8669 (no month)							
W	MR	Schweiger, L. et al, Strategies Towards Functionalised Electronically Conducting Organic Copolymers, Journal of Materials Chemistry, 2000, 10 pp. 107-114 (no month)							
W	NR	Ryder, K. et al., Strategies Towards Functionalised Electronically Conducting Organic Copolymers: Part 2 Copolymerisation, Journal of Materials Chemistry, 2000, 10, pp. 1785-1793 (no month)							
W	OR	Frackowiak, E. et al., Supercapacitor Electrodes from Multiwalled Carbon Nanotubes, Applied Physics Letters, 2000, Vol. 77, No. 15							
W	PR	Frackowiak, E. et al., Carbon Materials for the Electrochemical Storage of Energy in Capacitors, Carbon 39, 2001, pp. 937-950 (no month)							
W	QR	Ajayan, P., Nanotubes from Carbon, Chemical Review 1999, 1999, pp. 1787-1799 (no month)							

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AR	Conway, B., Origin and Significance of "Redox Supercapacitance" and its Manifestation at Various Inorganic Materials, The Electrochemical Society, 1993, p. 15 (no month)				
BR	Cimino, A. et al., Chemisorption and Catalysis on Metal Oxides, 1980, p. 97 (no month)				
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